Master Syllabus

Course Name: General Chemistry Course Number Proposed: 130 L

Lecture Hours: 0 Lab Hours: 2 Credit hours: 1

Suggested Enrollment Cap: 24

Course Description: Covers basic laboratory skills and provides an opportunity for students to conduct investigations which will reinforces the principles learned in Chemistry 130.

Prerequisite: DVMA 093 or above

Corequisite: Chemistry 130 Lecture

Learning Outcomes and Assessment Measures

Upon completion of Chemistry 130L, the student will be able to achieve the following with a 70% or better success rate:

- demonstrate a basic understanding of laboratory skills and operations that reinforce the content areas of Chemistry 130 lecture on assignments and exams;
- demonstrate the techniques of working safely and collaboratively in a laboratory environment on assignments and exams;
- organize data from legible and complete experimental records, using appropriate and adequate methods of representing data on pre- and post-laboratory assignments and laboratory reports;
- use the scientific method to design, conduct, and interpret basic laboratory experiments relevant to course content and to write concise and comprehensive laboratory reports in standard English.

Assessment:

- Individual instructor-designed exams will collectively assess a portion of the learning outcomes and will be administered during the semester as listed in the course syllabus.
- Individual instructor and collaborative departmentally-designed comprehensive final exam, adhering to a department-determined content, will assess a portion of the learning outcomes.

- Individual instructor-designed or collaborative instructor-designed assignments will be given as a portion of the total grade and will include pre- and post-laboratory assignments, laboratory reports, projects, homework, and quizzes; all assignments will be graded using an instructor-designed rubric.

Expanded Course Outline:

I. Basic Laboratory Techniques
   A. Laboratory Safety
   B. Proper handling of chemicals
   C. Proper use of laboratory Equipment
   D. Lab Report Writing
II. Laboratory Measurements
   A. Laboratory observations and the scientific method
   B. Measurement and the Metric System
   C. Density of Solids and Liquids
III. Physical and Chemical Properties
   A. Determining Physical and Chemical Properties
   B. Changes of State
IV. Chemical Bonding and Periodicity
   A. Periodic Classification of Elements
   B. Structure of Compounds
V. The Mole Concept
   A. Determining Avagadro's number
   B. Percentage of Water in a Hydrate